

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>C 2684 PCT</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/003784</b>	International filing date (day/month/year) <b>08.04.2004</b>	Priority date (day/month/year) <b>17.04.2003</b>
International Patent Classification (IPC) or national classification and IPC		
Applicant <b>COGNIS DEUTSCHLAND GMBH &amp; CO. KG</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003784

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-10 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. 1-5 \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003784

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims		YES
	Claims	1-3	NO
Inventive step (IS)	Claims		YES
	Claims	1-5	NO
Industrial applicability (IA)	Claims	1-5	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

1. This report makes reference to the following documents:

D1: DATABASE WPI Section Ch, Week 199843  
Derwent Publications Ltd., London, GB;  
Class A14, AN 1998-501706 XP002296759 &  
JP 10 218946 A (TOA GOSEI CHEM IND LTD)  
18 August 1998 (1998-08-18)

D2: WO 99/23175 A (HENKEL KGAA) 14 May 1999  
(1999-05-14)

## 2. Novelty

## 2.a

D1 discloses hardenable coating compositions containing di(meth)acrylates of dimer diols (abstract).

D1 also indicates that, preferably, no non-reacted polyvalent alcohol should remain after the esterification reaction (see the machine translation of the Japanese patent description, paragraphs 0004-0008; in particular 0006). Furthermore, D1

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

describes, as an example, the reaction of 0.091 moles of dimer diol with 0.200 moles of acrylic acid (example 2). Therefore, D1 likewise describes esterification degrees of at least 50% as claimed in claims 2 and 3.

Therefore, the subject matter of claims 2 and 3 lacks novelty (PCT Article 33(2)).

Although D1 does not expressly disclose the use of dimer diol (meth)acrylates als matting agents, the possibility cannot be excluded that, when dimer diol (meth)acrylates according to D1 are used, a matting effect could occur in the hardenable coating systems.

Therefore, the subject matter of claim 1 is not regarded as novel (PCT Article 33(2)).

2.b

D2 discloses the use of methacrylic acid esters of addition products of 1 to 80 mol ethylene oxide and/or propylene oxid on dimer diols with a majority of 36 to 44 C atoms as structural elements for radiation-curable coatings (claim 1).

On page 5 of the present application, the dimer diols used in accordance with the application are described as dimer diols that likewise have 36 to 44 C atoms.

Since the dimer diols are usually in the form of

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

mixtures (see also this application, page 5, second paragraph), the addition to the dimer diols of, for example, 1 mol of ethylene oxide according to D2 changes the structural composition of the dimer diols only insignificantly, and therefore it can be assumed that the addition products known from D2 also come under the scope of the dimer diol (meth)acrylates claimed in the present application.

Therefore, the subject matter of claims 2-3 does not appear to be novel (PCT Article 33(2)).

### 3. Inventive step

Dependent claims 4 and 5 contain no features that, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step. The reasons therefor are the following:

The features of the dependent claims are, in each case, only one of several directly derivable possibilities from which a person skilled in the art would choose according to the circumstances to solve the problem of interest, without thereby being inventive.

### 4. Other observations

In order to meet the PCT requirements, the description should cite documents D1 and D2 and briefly outline the relevant prior art contained

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003784

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
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therein.

The subject matter of the present application is regarded as industrially applicable within the meaning of PCT Article 33(4).